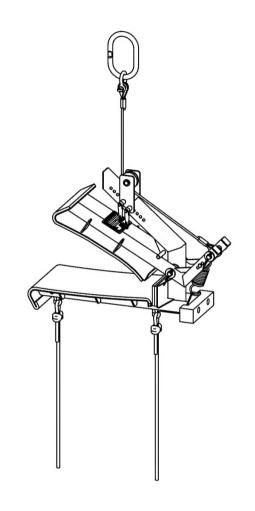
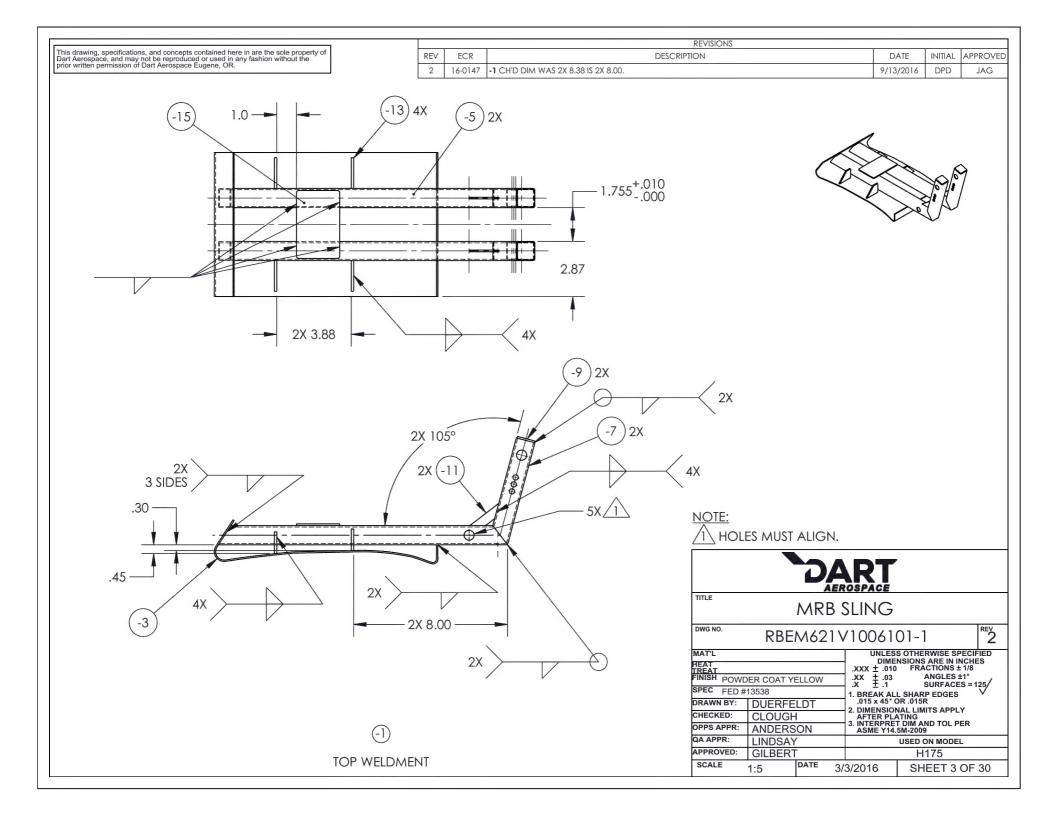


		REVISIONS REVISIONS			
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED

YZZ YTÇ	ASSY QTY	ASSY QTY	ASSY QTY	ASSY QTY	В/О	Part #	UNIT	Description	Material	B/O INFORMATION OR SPECIFICATIONS	
				Χ		-1	1	TOP WELDMENT			
				1		-3		TOP CLAMP	A36/1018/1020 HR		
				2		-5		TOP LONG TUBE	STEEL TUBE		
				2		-7		TOP SHORT TUBE	STEEL TUBE		
				2		-9		TUBE CAP	A36/1018/1020 HR		
				2		-11		TOP TUBE TO TUBE BRACE	A36/1018/1020 HR		
			6	4		-13		CLAMP TO TUBE BRACE	A36/1018/1020 HR		
			1	1		-15		RECTANGLE TUBE BRACE	A36/1018/1020 HR		
			X	·		-17	1	BOTTOM WELDMENT			
-			1			-19	<u> </u>	BOTTOM CLAMP	A36/1018/1020 HR		_
-			2			-21		BOTTOM TUBE	STEEL TUBE		
-			1			-23		BOTTOM UPRIGHT TUBE	STEEL TUBE		
_											
			1			-25		BOTTOM ANGLE TUBE	STEEL TUBE		
			1			-27		BOTTOM SPRING ANCHOR PLATE	A36/1018/1020 HR		
			1			-29		STOP GUSSET	A36/1018/1020 HR		
			1			-31		BOTTOM UPRIGHT SUPPORT	A36/1018/1020 HR		
			1			-33		LARGE TUBE CAP	A36/1018/1020 HR		
		Χ				-35	1	LIFTING BLOCK WELDMENT			
		2				-37		LIFTING BLOCK PLATE	1018/1020 CR		
		1				-39		LIFTING BLOCK SPACER	1018/1020 CR		
						-41	1	TOP CLAMP PAD	NEOPRENE/EPDM/SBR FOAM	1/4 X 42 WIDE, SOFT (MCMASTER-CARR #8647K33) MODIFIED	
						-43	1	BOTTOM CLAMP PAD	NEOPRENE/EPDM/SBR FOAM	1/4 X 42 WIDE, SOFT (MCMASTER-CARR #8647K33) MODIFIED	
						-45	2	BACK FOAM PAD	NEOPRENE/EPDM/SBR FOAM	1/4 X 42 WIDE, SOFT (MCMASTER-CARR #8647K33) MODIFIED	
						-47	1	REAR BUMPER	URETHANE, 60A	(MCMASTER-CARR #8644K24) MODIFIED	
	Χ					-49	1	LIFTING CABLE ASSEMBLY			
	1					-51		LIFTING CABLE	STEEL	Ø3/16, 6 X 19, 760 LBS CAPACITY (MCMASTER-CARR #3440T55) MODIFIED	
						-53	2	ROPE & CARABINER ASSEMBLY		[]	
						-55	_	ROPE	ARAMID	Ø5/16 (MCMASTER-CARR #38381751) MODIFIED	
_						-57	2	SPACER	S.S.	Ø5/16 I.D. X Ø3/4 O.D. X 5/8 (MCMASTER CARR #92320A728) MODIFIED	
_			1		D (O			DOWEL PIN		· · · · · · · · · · · · · · · · · · ·	
					B/O	-59			STEEL	Ø3/8 X 3-1/2 (MCMASTER-CARR #98381A638)	
			2		B/O	-61		DOWEL PIN	STEEL	Ø5/16 X 3-1/2 (MCMASTER-CARR #98381A598)	
	2				B/O	-63		LIFTING THIMBLE	STEEL	11/16 X 1-5/16, Ø3/16 CABLE (MCMASTER-CARR #3494T12)	
	2				B/O	-65		LIFTING OVAL SLEEVE	S.S.	Ø3/16 ROPE X 1 (MCMASTER-CARR #3755T17)	
					B/O	-67		CARABINER	STEEL	Ø5/16 THICK X Ø1/2 X 2-1/2, 3/8 OPENING (MCMASTER-CARR #3079T33)	
					B/O	-69	1	PULLEY	ALUMINUM	Ø1.755 O.D. X Ø1.255 GROOVE, Ø3/16 CABLE (MS20220A1)	
					B/O	-71	1	WASHER	S.S.	Ø1/4 (MCMASTER-CARR #92141A029)	
					B/O	-73	1	CLEVIS PIN	STEEL	Ø5/16 X 2 USABLE (MCMASTER-CARR #97245A308)	
					В/О	-75	4	WASHER	STEEL	Ø1/2 (MCMASTER-CARR #98023A033)	
					В/О	-77	2	THRUST BEARING	NYLON	Ø1/2 I.D. X Ø1.25 O.D. X .093107 (MCMASTER-CARR #90295A494)	
					B/O	-79	2	HEADLESS CLEVIS PIN	STEEL	Ø1/2 X 4 USABLE (MCMASTER-CARR #93890A499)	
					B/O	-81	2	L HANDLE BALL LOCK PIN	S.S.	Ø1/4 X 2 USABLE (MCMASTER-CARR #90302A114)	
					B/O	-83		LANYARD TAB	ALUMINUM	#10 (CARR-LANE #CL194-TAB-A)	
					B/O	-85	1	PAN HEAD MACHINE SCREW	STEEL	10-32 X 1/4 (MCMASTER-CARR #90403A823)	
					B/O	-87		LANYARD	COATED STEEL	Ø1/16 X 12 (CARR LANE #CL-2-C)	
-					B/O	-89		FERRULE	ALUMINUM	Ø1/16 x 3/8 (MCMASTER-CARR #3896T31)	
-							1	CLEVIS PIN		Ø1/4 X 3-13/16 USABLE (MCMASTER-CARR #92390A184)	
-					B/O	-91	2		S.S.		
_					B/O	-93	2	HAIR PIN	S.S.	Ø1/4 - Ø1/2 PIN, Ø1/16 WIRE (MCMASTER-CARR #92391A120)	
_					B/O	-95	-	EXTENSION SPRING	S.S.	Ø.148 WIRE X Ø1.25 O.D. X 4, 37 LBS/IN (CENTURY SPRING #81130S)	
_					B/O	-97	1	SHACKLE	STEEL	Ø5/16, 1500 WLL (MCMASTER-CARR #3558T46)	
					B/O	-99	1	OBLONG RING	S.S.	Ø1/2 X 2-3/8 X 4-1/4 (MCMASTER-CARR #30765T85)	
					B/O	-101		SOCKET HEAD CAP SCREW	STEEL	#10-32 X 7/8 (MCMASTER-CARR #90128A946)	
					B/O	-103	2	WASHER	STEEL	#10 (MCMASTER-CARR #98023A114)	
					B/O	-105	4	#2 DRIVE SCREW	COATED STEEL	#2 X 1/8 (MCMASTER-CARR #90081A074)	
						107			ATT		_
					B/O	-107	2	WASHER	STEEL	Ø5/16 (MCMASTER-CARR #98023A030)	





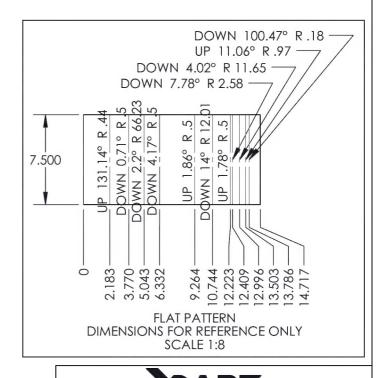
This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR. REV ECR — 10.43 — 🗸 🖚 **4.30** 3.5465.92 R.18 11.67 R11.65 R66.23 11,11 R12.01 .27 R.44 R2.58 2.15 1.1° - 11.63 7.50

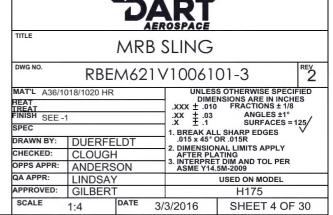
TOP CLAMP

 REVISIONS

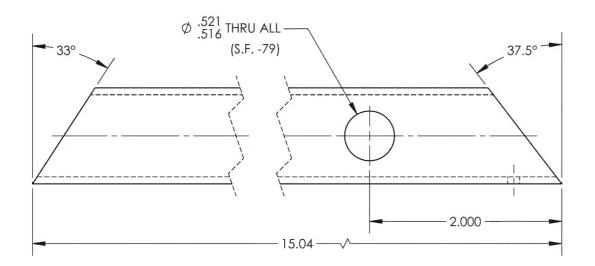
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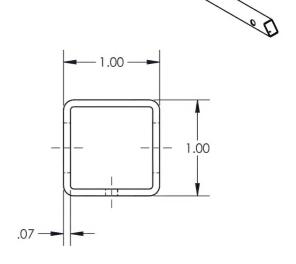


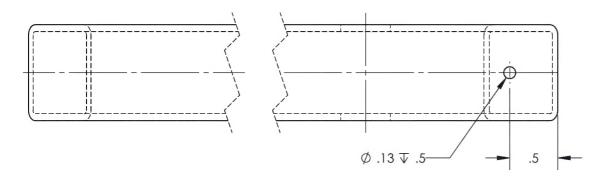




	REVISIONS								
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED				
2	16-0147	-5 CH'D DIMS WAS Ø.526531 THRU ALL S.F79 IS Ø.516521 THRU ALL (S.F79), WAS 15.42 IS 15.04.	9/13/2016	DPD	SM				







TITLE MRB SLING DWG NO. RBEM621V1006101-5 UNLESS OTHERWISE SPECIFIED MAT'L STEEL TUBE DIMENSIONS ARE IN INCHES

.XXX ± .010 FRACTIONS ± 1/8

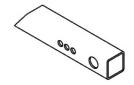
.XX + .03 ANGLES ±1°

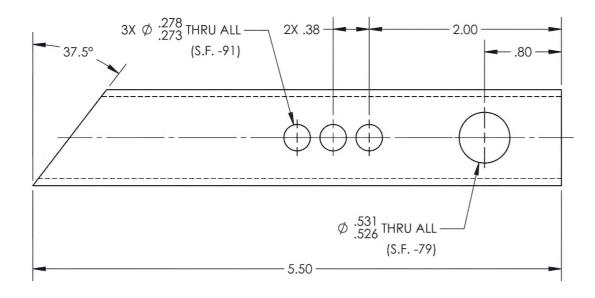
X ± .1 SURFACES = 125/ HEAT TREAT FINISH SEE -1 SPEC 1. BREAK ALL SHARP EDGES .015 x 45 'OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009 DRAWN BY: DUERFELDT CHECKED: CLOUGH OPPS APPR: ANDERSON QA APPR: LINDSAY USED ON MODEL APPROVED: GILBERT H175 SCALE 3/3/2016 SHEET 5 OF 30 1:1

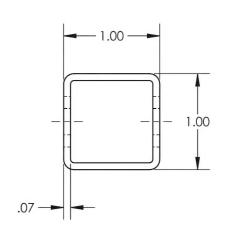
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TOP LONG TUBE

		REVISIONS			
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED



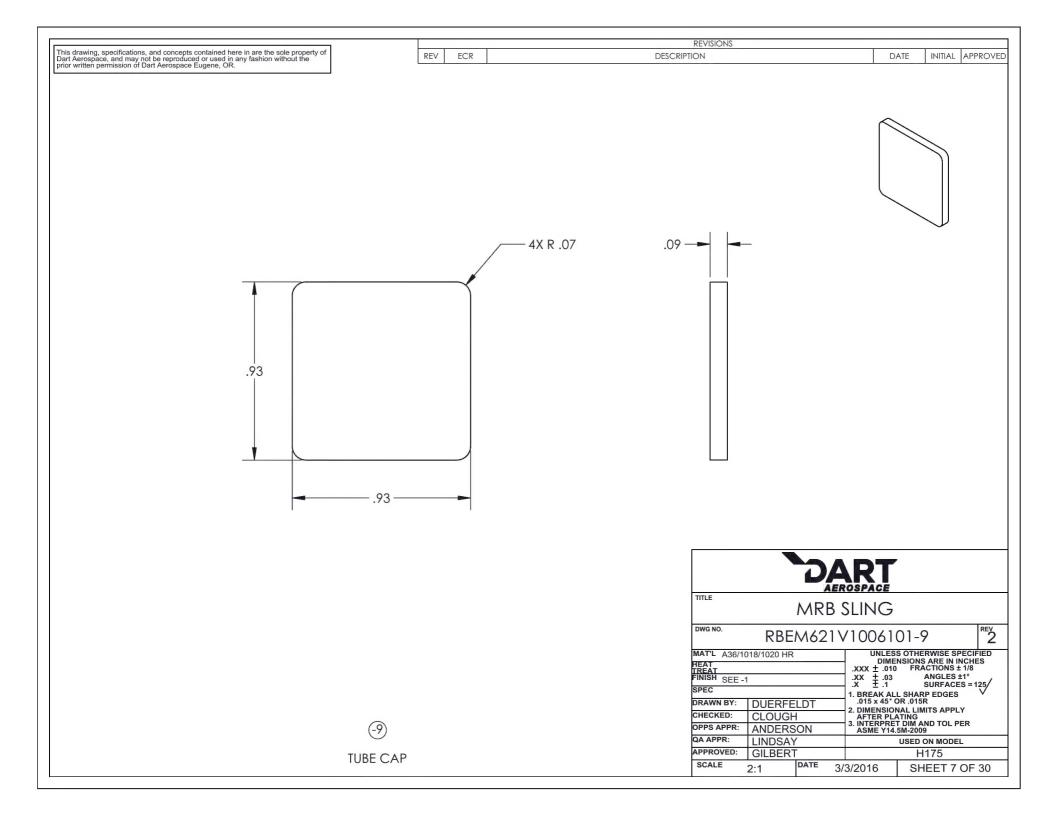




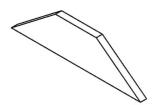
		DA AER	CSPACE		
TITLE		MRB S	SLING		
DWG NO.	RBE	M621V	/10061	01-7	^{REV} 2
MAT'L STEEL HEAT TREAT FINISH SEE -/ SPEC DRAWN BY: CHECKED: OPPS APPR:	DUERFE CLOUGH	l	DIME .XXX ± .010 .XX ± .03 .X ± .1 1. BREAK AL .015 x 45° C 2. DIMENSION AFTER PLA	ANGLES ±1° SURFACES = 1 L SHARP EDGES DR .015R NAL LIMITS APPLY ATING T DIM AND TOL PER	s
QA APPR:	LINDSAY	/	USED ON MODEL		
APPROVED: SCALE	GILBERT	DATE.	3/2016	H175 SHEET 6 OF	20
	1:1	3/	3/2016	SHEET 6 OF	30

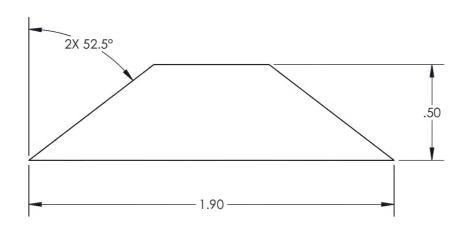


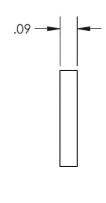
TOP SHORT TUBE

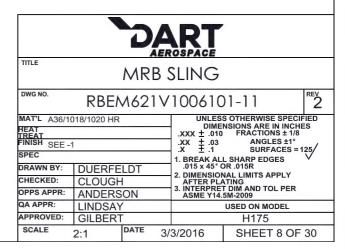


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REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED







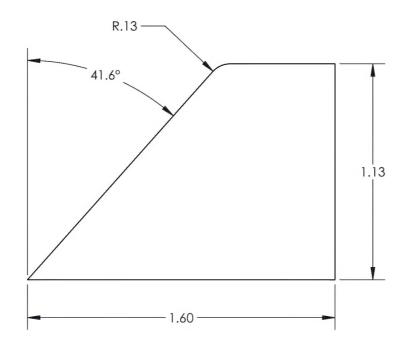


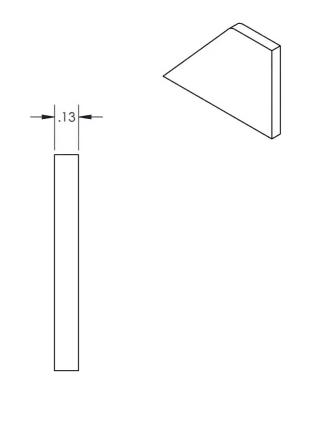
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TOP TUBE TO TUBE BRACE

 REVISIONS

 REV
 ECR
 DESCRIPTION
 DATE
 INITIAL
 APPROVED

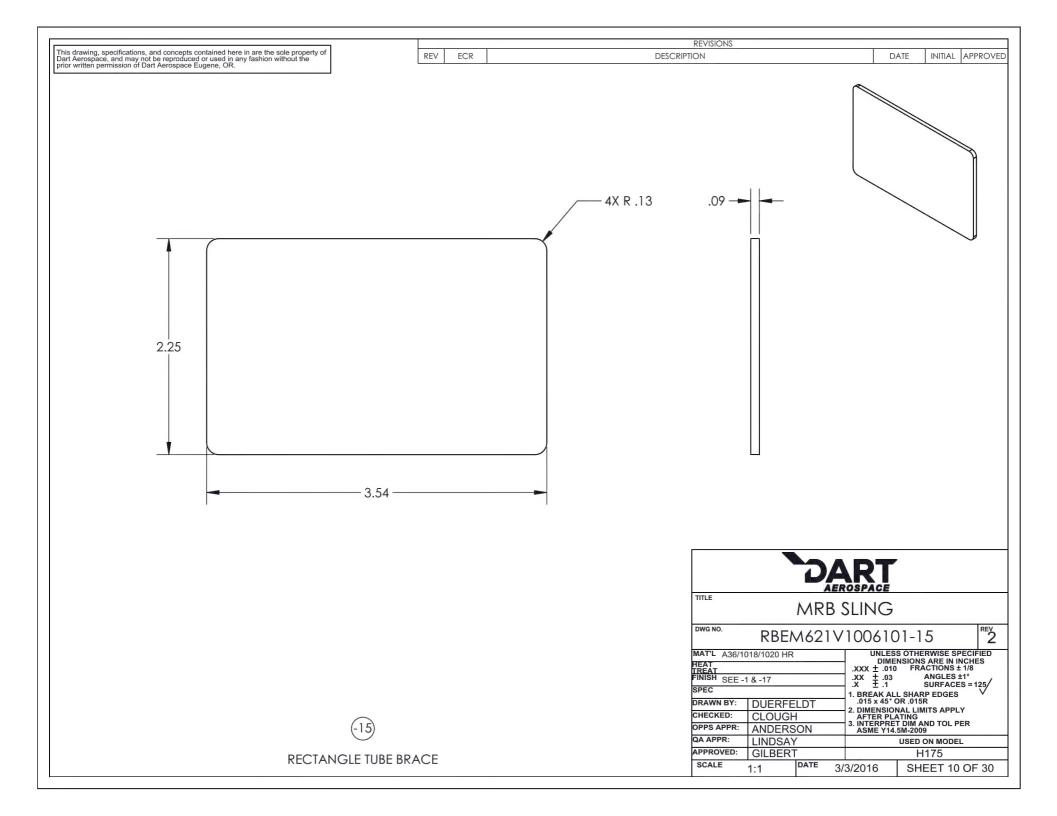


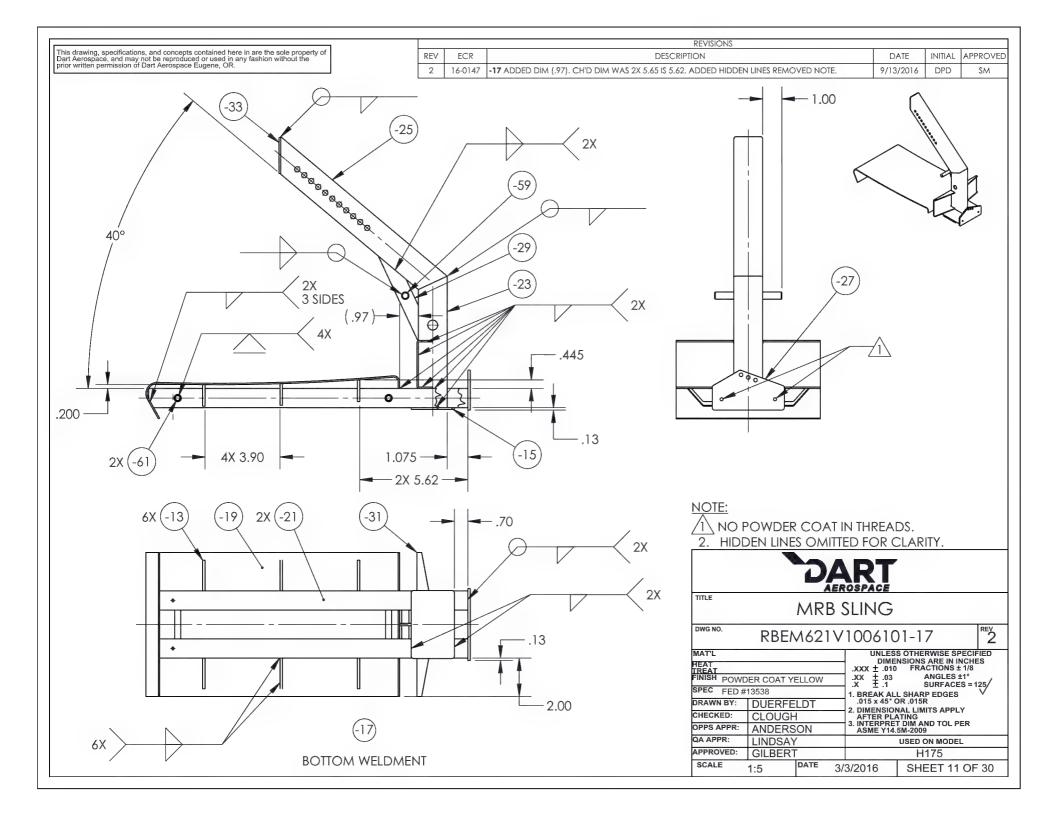


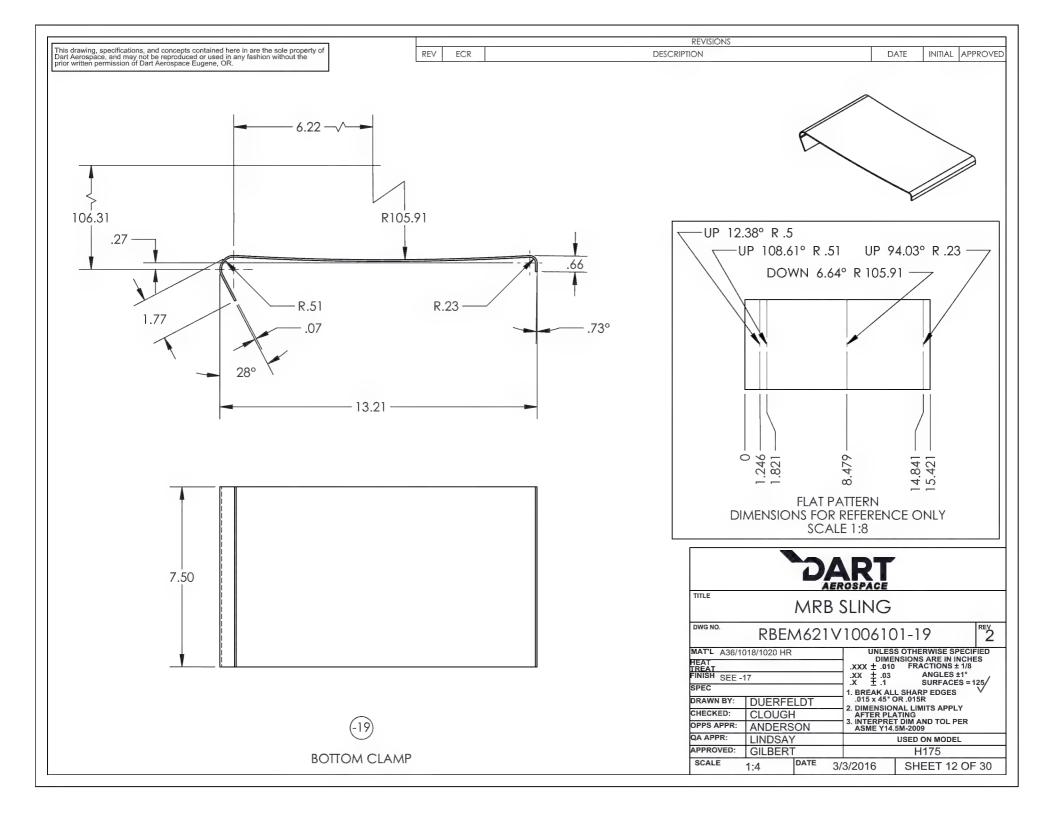
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CLAMP TO TUBE BRACE

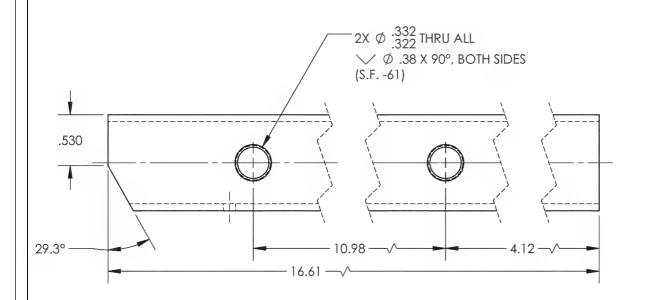
DART							
TITLE							
RBEM621V				100610)1-13	^{REV} 2	
HEAT TREAT	018/1020 HR 1 & -17			UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .010 FRACTIONS ± 1/8 .XX ± .03 ANGLES ± 1° .X ± .1 SURFACES = 125/			
SPEC				1. BREAK AL	L SHARP EDGES	V	
DRAWN BY:	DUERFE	LDT		.015 x 45° C	OR .015R NAL LIMITS APPLY		
CHECKED:	CLOUGH	1		AFTER PLA	ATING		
OPPS APPR:	ANDERS	ON		ASME Y14.	T DIM AND TOL PER 5M-2009		
QA APPR: LINDSAY			USED ON MODEL				
APPROVED:	APPROVED: GILBERT				H175		
SCALE	2:1	DATE	3/	3/2016	SHEET 9 OF	30	

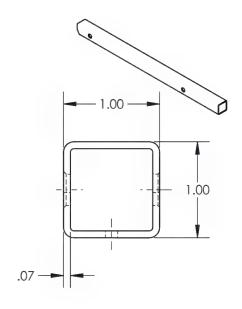


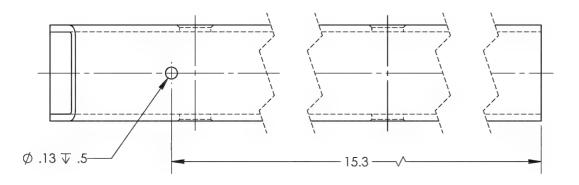


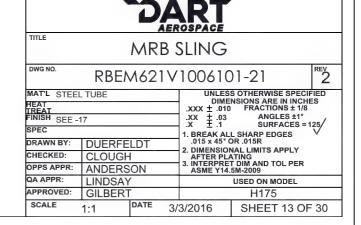


REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0147	-21 CH'D DIMS WAS 16.64 IS 16.61, WAS 15.4 IS 15.3.	9/13/2016	DPD	JAG





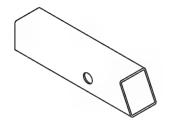


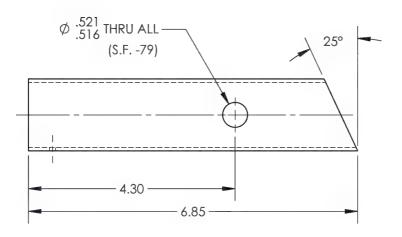


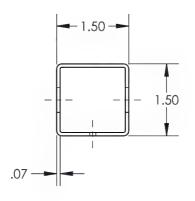
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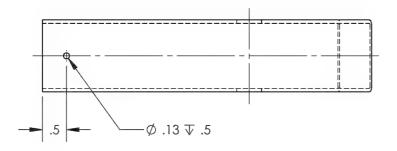
BOTTOM TUBE

	REVISIONS									
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED					
2	16-0147	-23 CH'D DIM WAS Ø.526531 THRU ALL S.F79 IS Ø.516521 THRU ALL (S.F79)	9/13/2016	DPD	SM					





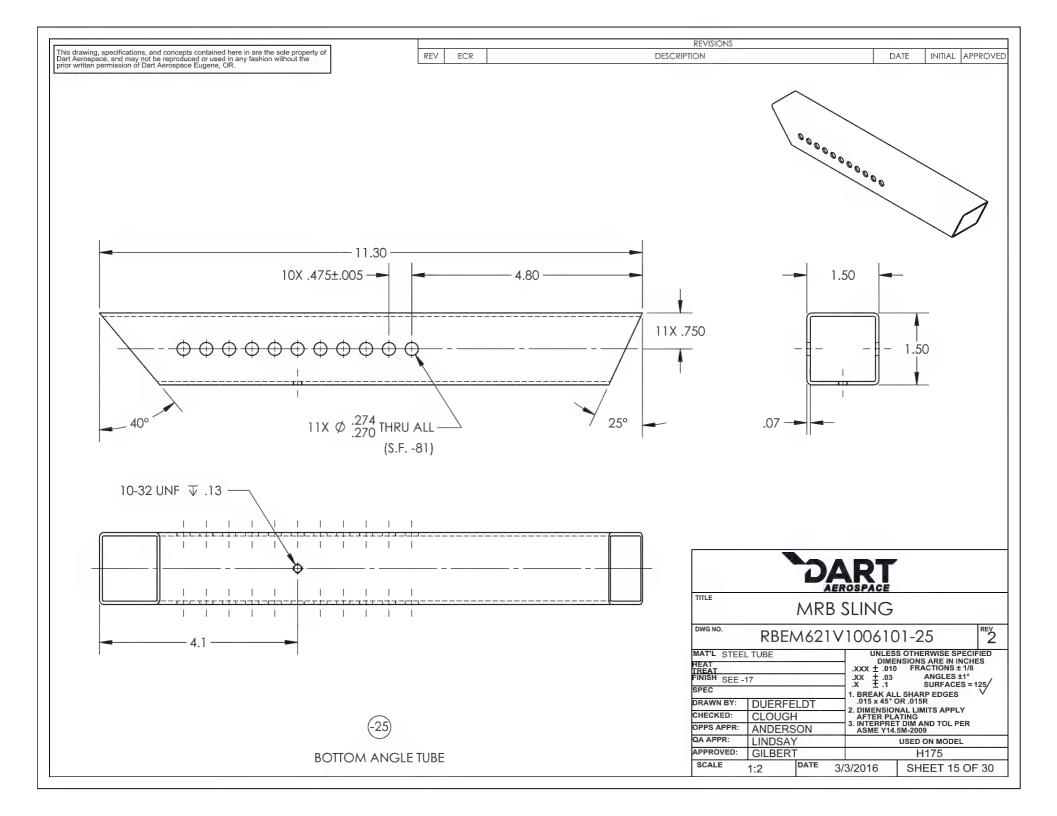


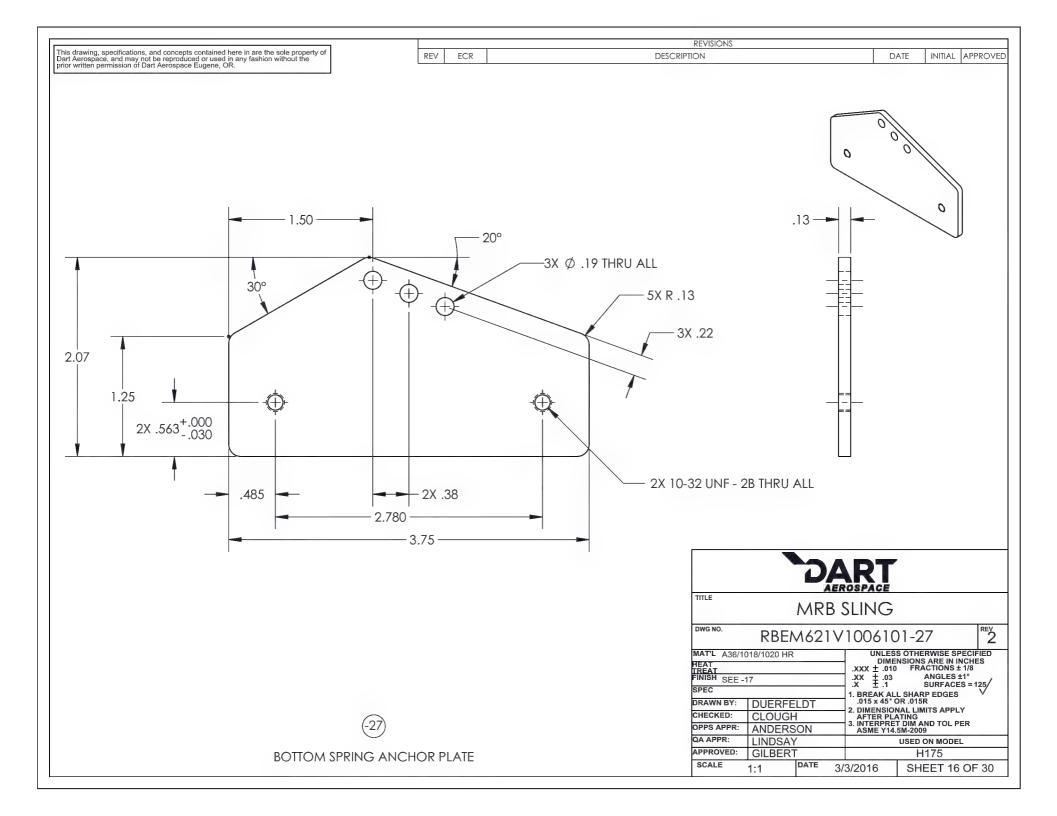




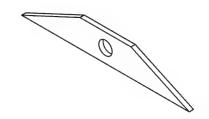
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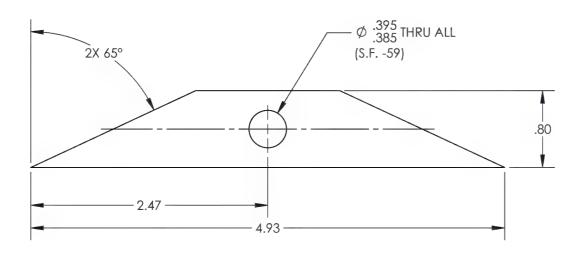
BOTTOM UPRIGHT TUBE

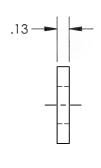


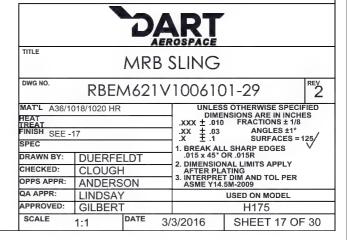


		REVISIONS			
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED



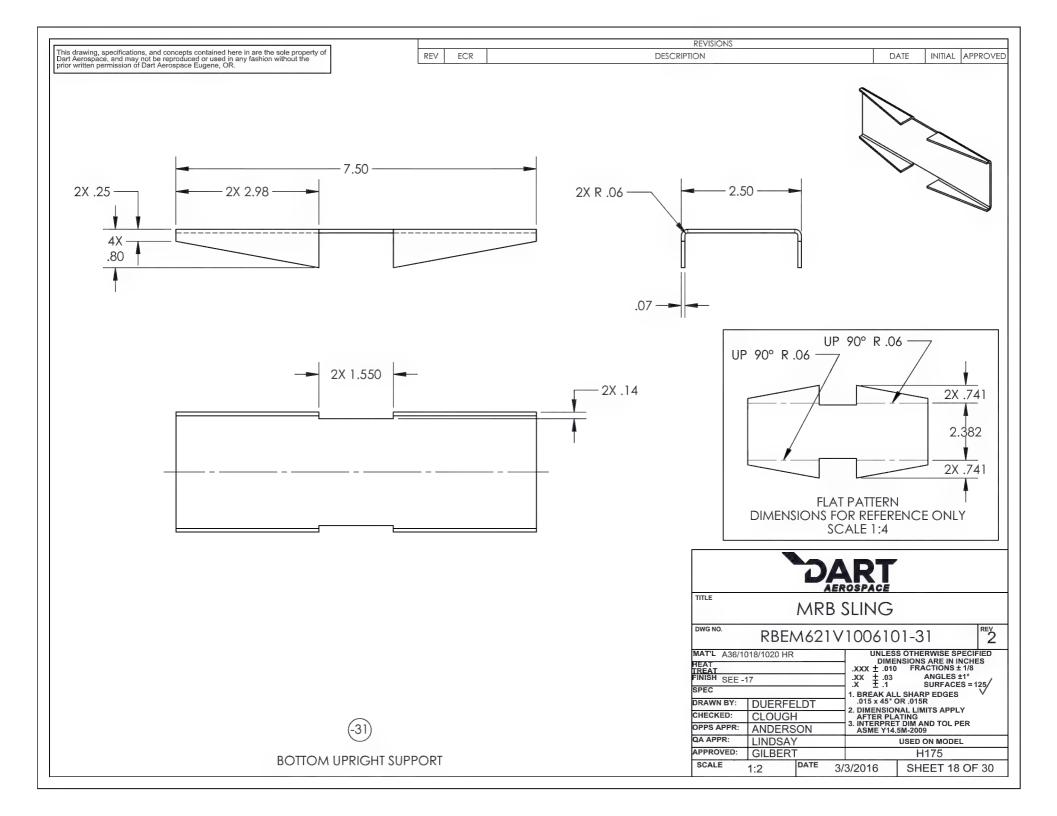








STOP GUSSET



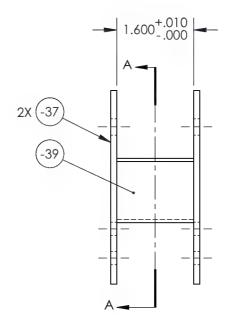
REVISIONS This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR. DESCRIPTION INITIAL APPROVED REV ECR DATE -4X R .13 1.89 —— 1.43 — TITLE MRB SLING DWG NO. RBEM621V1006101-33 MAT'L A36/1018/1020 HR UNLESS OTHERWISE SPECIFIED HEAT TREAT FINISH SEE -17 SURFACES = 125 SPEC A T.I.

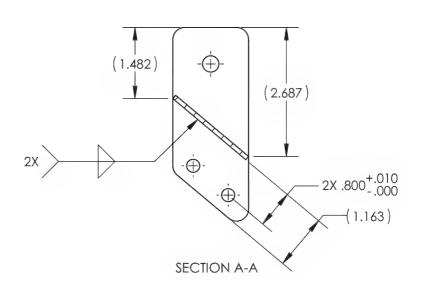
1. BREAK ALL SHARP EDGES

.015 x 45° OR .015R

2. DIMENSIONAL LIMITS APPLY
AFTER PLATING
3. INTERPRET DIM AND TOL PER
ASME Y14.5M-2009 DRAWN BY: DUERFELDT CHECKED: CLOUGH OPPS APPR: ANDERSON QA APPR: USED ON MODEL LINDSAY APPROVED: GILBERT H175 LARGE TUBE CAP SCALE 1:1 3/3/2016 **SHEET 19 OF 30**

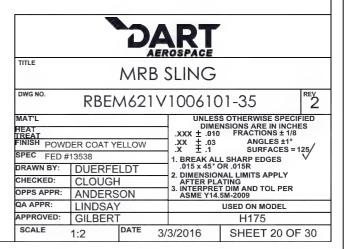
REVISIONS							
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED		
2	16-0147	-35 CH'D DIM WAS .800 +.010000 IS 2X .800 +.010000.	9/13/2016	DPD	SM		



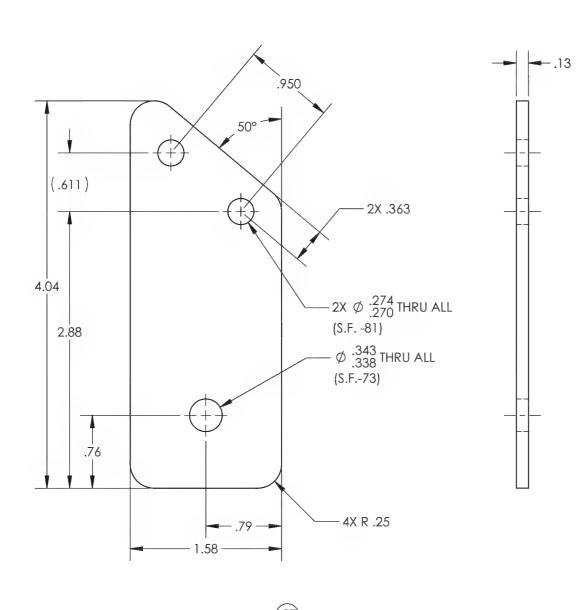




LIFTING BLOCK WELDMENT



	REVISIONS							
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED			
2	16-0147	-37 CH'D DIMS WAS .57 IS .76, WAS Ø.275280 THRU ALL S.F73 IS Ø.338343 THRU ALL (S.F73).	9/13/2016	DPD	SM			



LIFTING BLOCK PLATE



MRB SLING

RBEM621V1006101-37

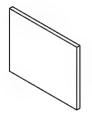
MAT'L 1018/1020 CR UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

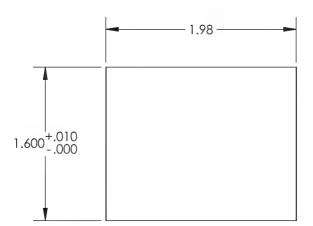
.XXX ± .005 FRACTIONS ± 1/8

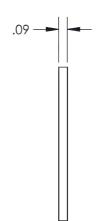
.XX + .01 ANGLES ± .5°

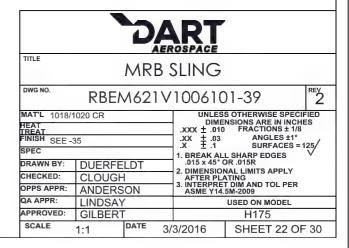
.X ± .1 SURFACES = 125/ HEAT TREAT FINISH SEE -35 SPEC 1. BREAK ALL SHARP EDGES .015 x 45 'OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009 DRAWN BY: DUERFELDT CHECKED: CLOUGH OPPS APPR: ANDERSON QA APPR: LINDSAY USED ON MODEL APPROVED: GILBERT H175 SCALE 1:1 3/3/2016 **SHEET 21 OF 30**

ı		REVISIONS REVISIONS				
	REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED





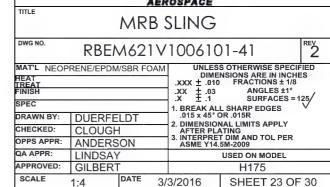




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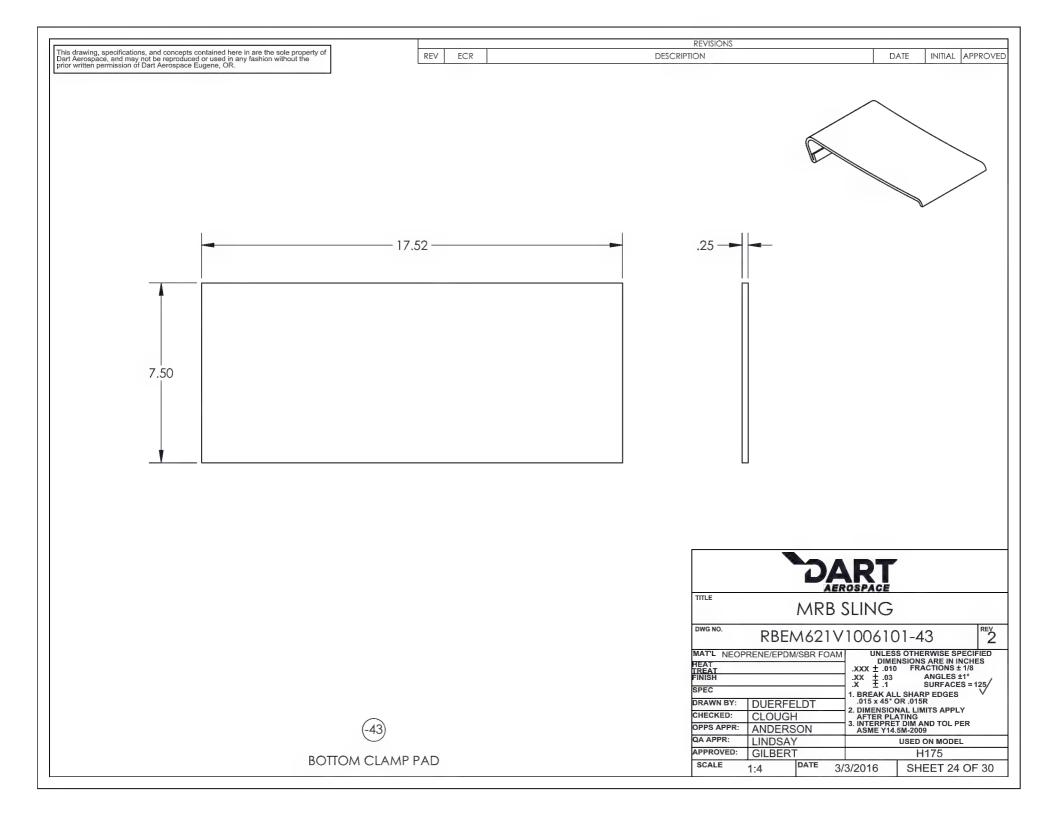
LIFTING BLOCK SPACER

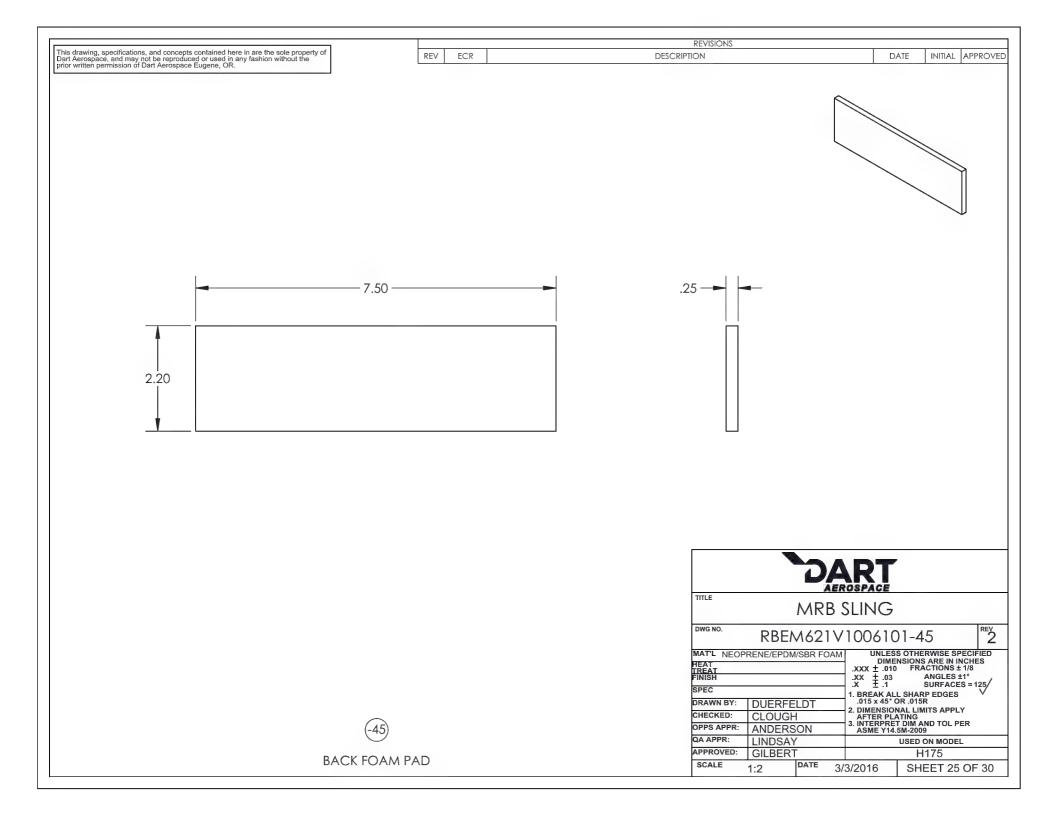
REVISIONS This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR. DESCRIPTION INITIAL APPROVED REV ECR DATE - 14.31 -7.50

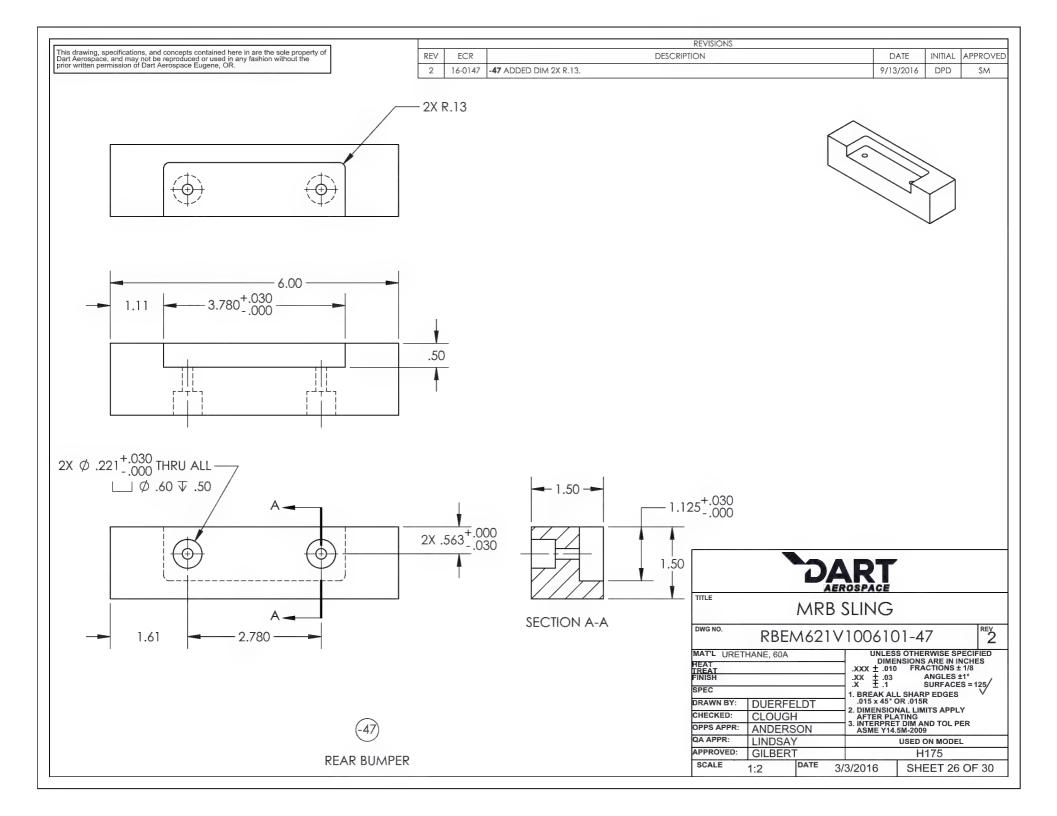


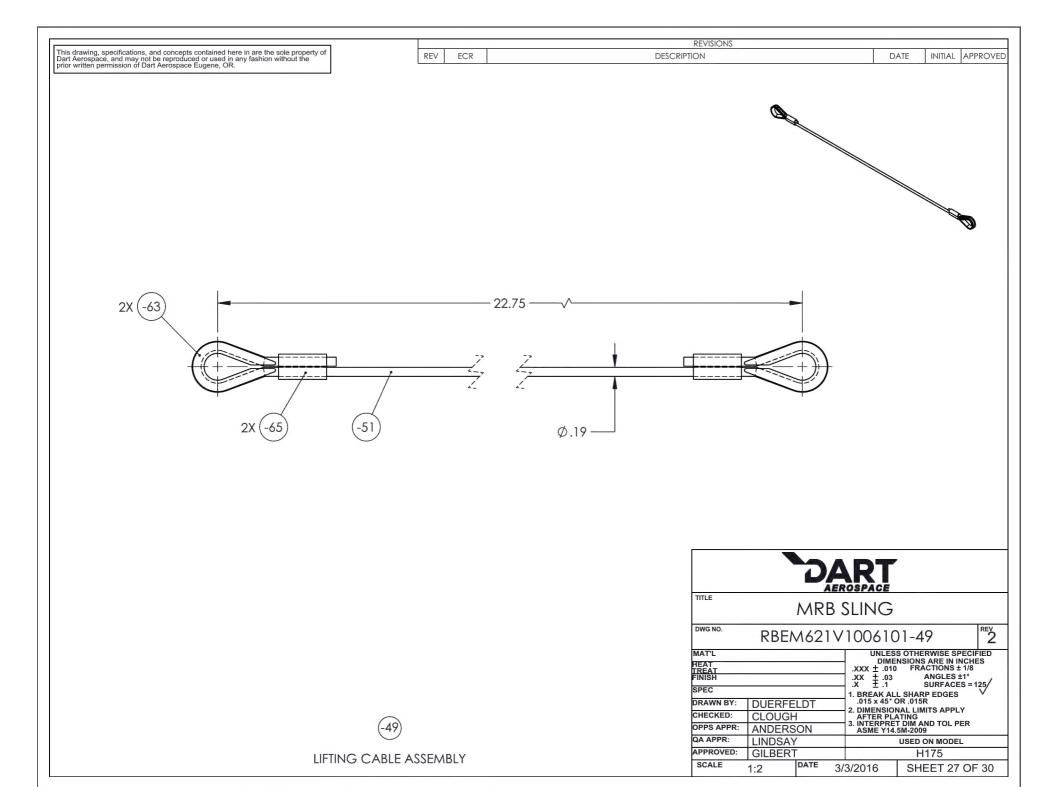
(-41)

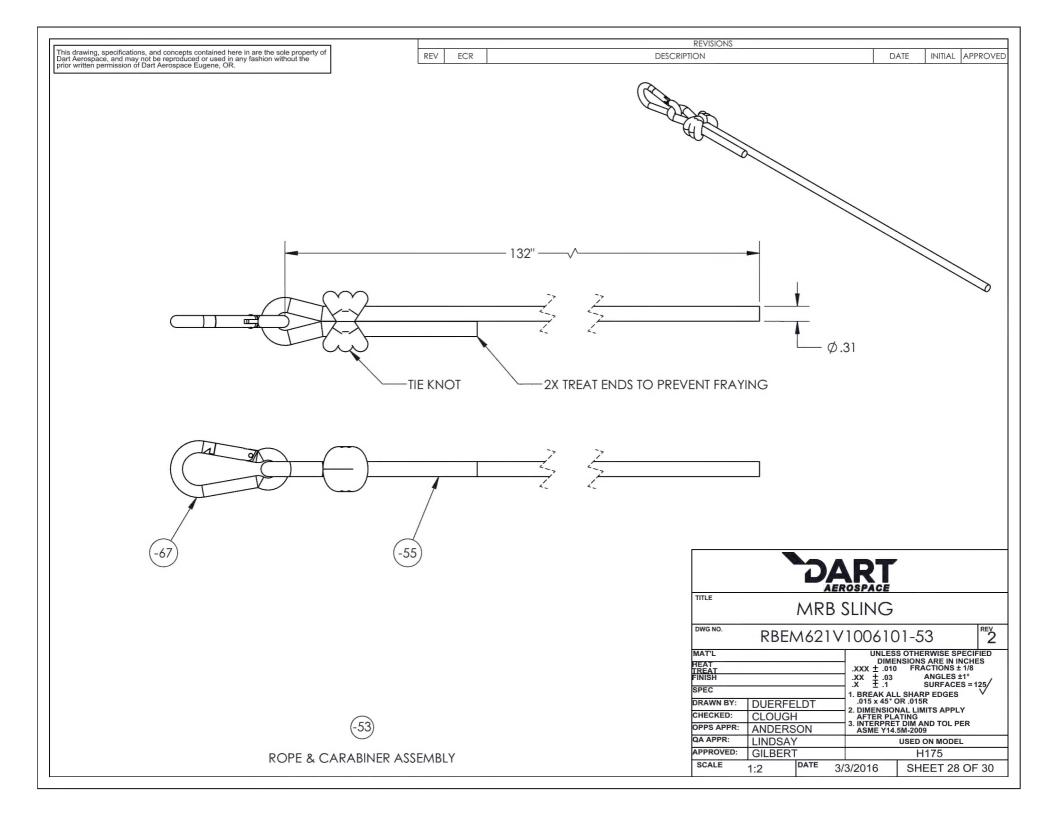
TOP CLAMP PAD





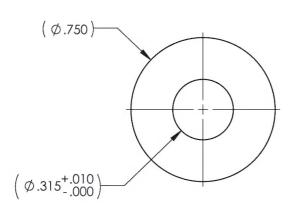


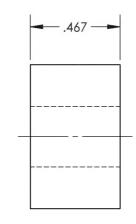




REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0147	-57 CH'D DIMS WAS (Ø.625) IS (Ø.750), WAS (Ø.252 +.010000) IS (Ø.315 +.010000), WAS .537 IS .467.	9/13/2016	DPD	SM



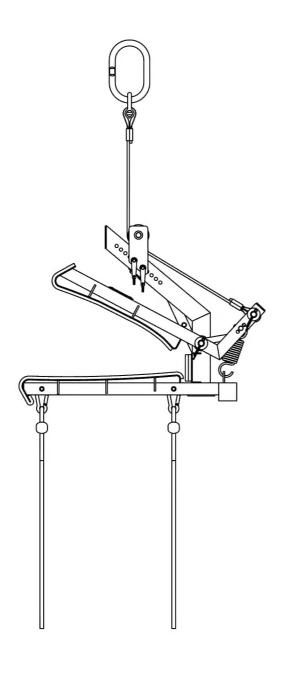




	DART					
MRB SLING						
DWG NO.	RBEM621V			1-57	2	
MAT'L S.S. HEAT TREAT FINISH SPEC			UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± .5° .X ± .1 SURFACES = 125 1. BREAK ALL SHARP EDGES			
DRAWN BY: CHECKED: OPPS APPR:	DUERFE CLOUGH ANDERS	1	AFTER PLA	DNAL LIMITS APPLY LATING ET DIM AND TOL PER		
QA APPR: APPROVED:	LINDSAY : GILBERT			USED ON MODEL H175		
SCALE	2:1	DATE 3/	3/2016	SHEET 29 OF	30	



SPACER



FIRST ARTICLE WEIGHT TEST

INSPECTION & TESTING PROCEDURES FOR THE RBEM621V1006101, MRB SLING.
THIS ASSEMBLY IS DESIGNED TO LIFT A MAIN ROTOR BLADE.
THIS ASSEMBLY SHOULD BE INSPECTED BEFORE EACH USE.
REPLACE ANY ITEMS THAT ARE DAMAGED OR SUSPECTED
OF DAMAGE BEFORE USING!

FIRST ARTICLE WEIGHT TEST

- 1. AFTER INSPECTION, PLACE 330 LBS. IN MRB SLING.
 LIFT MRB SLING USING AN APPROPRIATE
 LIFTING DEVICE, FOR AT LEAST 5 MINUTES, CONTINUALLY
 CHECKING FOR CRACKS, DEFLECTION, OR DISTORTION.
- 3. REMOVE WEIGHT AND RE-INSPECT TOOL, CHECKING FOR STRESS CRACKS, BENDING, OR DISTORTIONS.

INSPECTOR:	
TESTER:	
S.N.:	
DATE:	



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MRB SLING

DWG NO.
RBEM621V1006101 2 CUSTOMER 1 OF 1

SCALE 1:8 DATE 3/3/2016 SHEET 30 OF 30